

Combined-Arms Gunnery: Restoring the Fundamentals

by LTG Michael S. Tucker

LTC Highspeed, battalion commander for 3-99th Combined Arms Battalion, was frustrated. Though fairly new to command (approaching 60 days), his unit's execution of qualification gunnery was winding down, but admittedly things were not quite right and his frustration was changing to embarrassment. The level of organization on the ranges was lacking, indicating that key personnel within his organization did not fully understand gunnery planning and execution.

As he witnessed several runs from the tower, it was obvious that armament accuracy checks and prep-to-fire checks were not being conducted to standard, with multiple alibis due to faults which would have been caught in these earlier checks. Also, his crews appeared to be slow during engagements, and Table VI qualification scores did not match the success the crews attained on the previous gate tables. Safety was emerging as an issue, which indicated some of the crews were probably lucky on the previous tables and not as skilled as they needed to be for qualification.

He noticed that even though his units employed Thru-Site Video (TSV) on preliminary ranges, the vehicle-crew evaluators (VCEs) did not appear to understand or leverage captured video in crew debriefs to enhance self-discovery learning and correct crew error. Disorganized range operations resulted in wasted live-fire time, and the overall lack of efficiency caused his battalion to extend their gunline into his sister battalion's range time. He was not looking forward to explaining this to his brigade commander, COL Hardcore. He promised himself that the next time the unit went to gunnery, it was going to be different!

This article's purpose is to share more than four decades of experience in both the art and science of planning, preparing and executing tank and various mounted-platform gunnery. To some, the ideas expressed in this article are not new and reflect how units prepared for gunnery prior to operations Iraqi Freedom (OIF) and Enduring Freedom. In fact, these were practices many units employed prior to operations Desert Shield and Desert Storm and during the early years of OIF, prior to the transition to counterinsurgency (COIN) training. Over time, the know-how and institutional memory for these fundamental practices faded from our noncommissioned officer (NCO) and officer corps through attrition (retirement, end-term-of-service and atrophy). To reverse this trend and improve the rate at which the mounted force resharpen its saber, we must ensure our training is tough, realistic and cost-effective.

Our Army has faced adversity many times during the course of its several-hundred-year history, and today's Army is no different. Traditional gunnery skills eroded as the Army focused on COIN, resulting in generations of officers and NCOs well trained in motorized-infantry tactics at the expense of armor/mechanized-infantry tasks, which are gradually returning as the gunnery culture is relearned.



Figure 1. An M1A2 Abrams fires a 120mm round at a target during live-fire qualifications at the Udairi Range Complex in Kuwait April 26, 2015. (U.S. Army photo by Capt. Shaun Manley)

Gunnery top 10

Following are my “top 10”– actions that assisted me during four decades of gunnery training. These observations are based on my own hard-earned experiences when I often failed but learned from each failure. I believe these observations can help you prepare your unit for gunnery, increase your unit’s overall gunnery performance and, most importantly, create lethal crews.

1. **A hot or wet range is a precious resource that cannot sit idle.** Once granted permission to fire by Range Control, your crews should be putting rounds downrange. While crews are firing, there must be a supply of crews “waiting on deck” to begin their run as crews complete the course or in the event that a crew is directed to leave the course prior to completion of the table it is executing. As a rule, for every crew negotiating the course, there must be another crew at the ready: prep-to-fire checks complete, boresighted and communications tested, standing by on the ready line.
2. **Maintain situational awareness.** If firing behind another company, coordinate with the unit to have at least a platoon’s worth of vehicles arrive at the next range the day prior and offer to repay the favor at a later date. Anticipate success and position your unit to take advantage of time available. The time you gain may be needed to offset range time lost due to range fires, inoperable targetry, weather conditions, etc. Require crews identified to fire later in the firing order to monitor the admin-net (you must run a range admin net) throughput to anticipate opportunities to move forward in the firing order. This is inevitable.
3. **Set conditions for success.** Designate and empower your beachmasters early, and ensure they understand their roles. The beachmaster ensures the range is organized and efficient, and crews are where they need to be. This individual is constantly on the move among the boresight line, ready line, ammo pad, range tower and after-action-review (AAR) shack to ensure tempo is not lost. Units that fail to designate a strong beachmaster will pay a heavy price in disorganization and wasted range time – *your most precious resource*.
4. **Establish “smart” business rules.** At the completion of each crew’s firing run, require the vehicle commander to report the number of rounds expended by type to the ammo pad and the tower on the admin net. Why is this important? Range regulations require the unit have accurate inventories of ammo on the ammo pad. Often ranges are shut down until the unit can generate an accurate report. Also, the unit master gunner needs to know how many rounds are available to support the refiring of engagements for unqualified crews. Whomever is designated within the unit to fill out the 2408-4 Weapon Record Data Card will also need to know the number of rounds fired (by type) to track both gun-tube and breech-block life. The ideal time to collect this information is either when the vehicle is cleared at the completion of a run or when the last firing vehicle returns to the ammo pad when dunnage is turned in.
5. **Video feeds provided by TSV are an invaluable source of information – use it!** Live audio-video provides an inside look at crew interaction during execution of an engagement, which can help the VCE with the AAR process (see Figure 2). VCEs can determine switchology errors by the gunner or vehicle commander (VC), observe safety violations and actually observe the engagement through the gunner’s or commander’s sight. This provides the VCE an accurate assessment of reticle aim, range to target, ammunition and tracking of targets. More importantly, the collection of video files provides a great library from which commanders and master gunners can leverage examples of what right looks like or common mistakes as part of their VCE training program and for training new tank crews. The Army has invested a significant amount of money on these devices for a reason: they work!
6. **Mission command.** A representative from the chain of command (company commander, battalion commander, battalion command sergeant major or master gunner) should observe every main gun engagement throughout gunnery. This command presence reinforces the emphasis on gunnery to the unit and provides leadership an opportunity to conduct mission command. Should a crew miss two consecutive targets during a precision engagement, the chain of command is in a position to direct the range officer in charge to remove the crew from the range immediately to determine if the problem is mechanical or crew error. Maintenance personnel correct mechanical errors; master gunners and unit leadership correct crew-induced errors.
7. **Records management as it pertains to crews is often overlooked.** Create a folder/file for each crew and place previous gunnery scores and AAR information in the file for review. Include the crew’s gunnery-skills testing data and Advanced Gunnery Training System/Bradley Advanced Training System information, as all this information provides critical information to the VCE. This folder supports the identification of trends, positive

and negative, for the crew and/or the unit that can be addressed by unit master gunners and chain of command.

8. **Battlefield presence.** Similar to mission command, the battalion commander or command sergeant major should be present in the tower during crew qualification. Again, if the crews see that qualification is important to the battalion commander/command sergeant major, this reinforces the gunnery culture within the unit. Master gunners should be present in the tower to interface with VCEs and ensure they are maintaining gunnery standards. Consider recognition of crews who qualify on the first qualification run with a steak dinner from the dining facility or some other meal in their honor. Honoring a crew for a successful qualification run encourages crews to train harder, as no crew wants to fail to qualify. Crews who do not qualify on their first run will remember this and will train harder for the next qualification gunnery so they can get recognition in front of their peers. Leader vehicles (commander, executive officer, S-3, company commander, platoon leader and platoon sergeant) are always expected to qualify the first time and lead from the front by being the first crew downrange at echelon.
9. **Failing to plan is a plan to fail.** Units cannot have the attitude that all they need to do is simply show up on the range and qualify with little to no preparation time invested. Gunnery is what crews live for. If there are crews in your organization who are not excited about gunnery and are unwilling to invest in the time required to make themselves better, maybe those personnel should consider a different military occupation specialty. Think of the training gates for gunnery as playoff games that lead to the Super Bowl of qualification gunnery. Consider awarding a trophy and/or streamers that are displayed on the unit guidon for the company and platoon who earns the highest average scores on Table VI. A company or platoon that has an unqualified crew after a Table VI qualification gunnery should be ineligible for a trophy or streamer, thus reinforcing the importance that every crew must qualify Table VI on its first attempt. Remind crews that if they are good enough, they may earn the right to represent their unit in a "best of the best" competition against other units across the Army for the title of best crew (i.e., Sullivan Cup for Abrams crews).
10. **Have fun!** Gunnery should be a positive, morale-building endeavor your unit should enjoy because the ability to fire live ammunition is typically limited to one or two opportunities per year. Generations of crews have spent countless hours in garrison and in the field retelling gunnery "war stories," so help your crews continue this time-honored tradition and train them well.

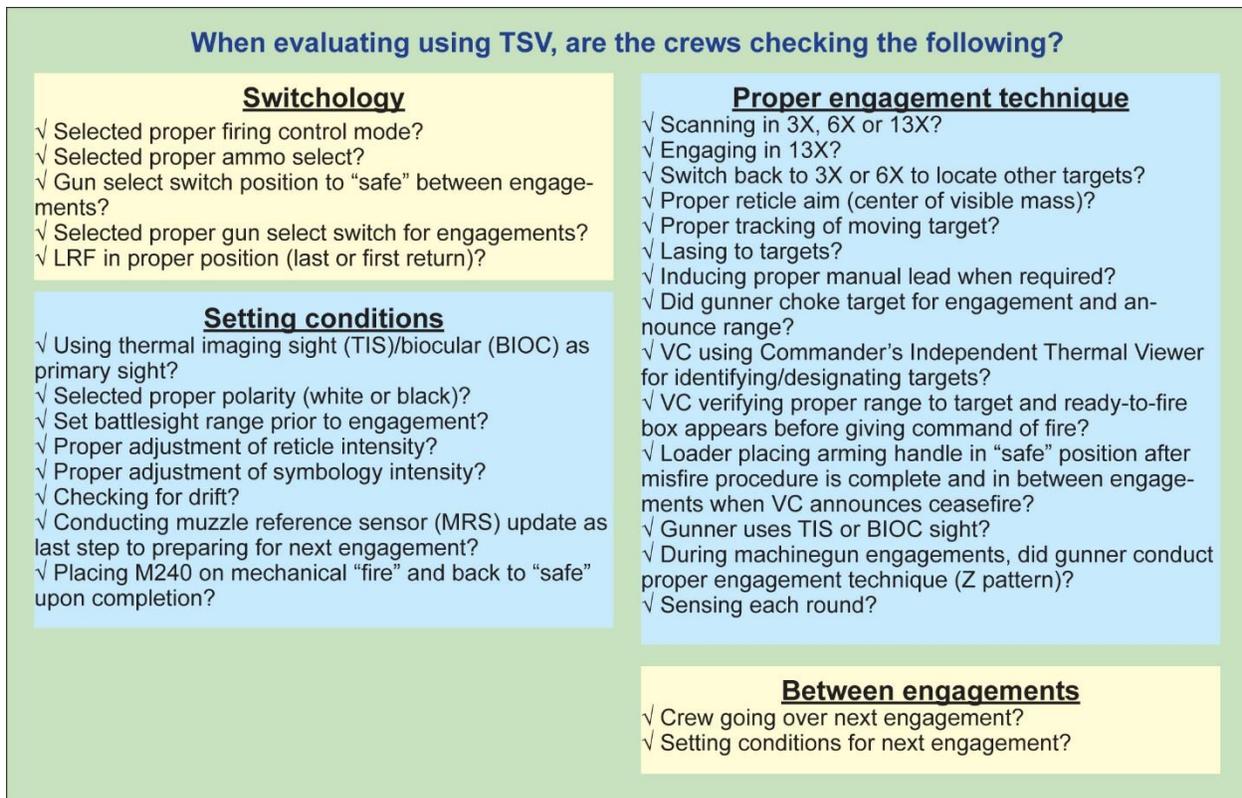


Figure 2. VCE checklist (M1A2) when using TSV.

Conclusion

The importance of preparing our crews for gunnery cannot be underestimated. It is those skills each crew employs during gunnery that carry over into combat. If we as leaders fail to develop lethal crews during peacetime training, we are doing a great disservice to those Soldiers, their families and the nation. When training is complete, our Soldiers need confidence in their training, confidence in their equipment and confidence in their leaders. Finally, remember that gunnery is about putting "steel on target," and that is what the mounted force brings to the combined-arms fight. Developing lethal crews and restoring the required rigor in our gunnery culture will ensure our formations are ready when the nation calls.

LTG Michael Tucker commands First Army. He entered the U.S. Army as a private in 1972 and has served in a variety of leadership positions, completing his enlisted career as a drill sergeant in 3rd Basic Combat Training Brigade at Fort Leonard Wood, MO. He was then commissioned as an Armor lieutenant through Officer Candidate School. Previous assignments include commanding general, 2nd Infantry Division, and commander, 1st Brigade, 1st Armored Division, which included a deployment in support of OIF. During his 44-year career, he has commanded at platoon through division level, including tank-platoon leader; tank-company executive officer; battalion motor officer; battalion adjutant; battalion operations officer; U.S. Military Academy professor of military science; division G-3; executive officer to the commanding general of U.S. Army Europe; assistant division commander for both maneuver and support; deputy commanding general of the U.S. Armor School; deputy commanding general of Walter Reed Army Medical Center; assistant surgeon general for Warrior Care Transition in the Office of the Surgeon General, Washington, DC; deputy chief of staff, operations, for the International Security Assistance Force; and assistant deputy chief of staff, G-3/5/7, Headquarters Department of the Army. Tucker's 25 years of overseas assignments and deployments include multiple tours to Germany, the Republic of Korea and operational deployments to operations Desert Shield/Desert Storm, Iraqi Freedom and Enduring Freedom. His military schooling includes Armor Officer Basic and Advanced Course, Canadian Land Forces Command and Staff College, U.S. Army Command and General Staff College and U.S. Army War College. His civilian education includes a bachelor's of science degree in psychology from the University of Maryland, a master's degree in military arts and sciences from

U.S. Army Command and General Staff College and a master's degree in public administration from Shippensburg University.

Acronym Quick-Scan

AAR – after-action review

BIOC – biocular

COIN – counterinsurgency

NCO – noncommissioned officer

OIF – Operation Iraqi Freedom

TIS – thermal imaging sight

TSV – Thru-Site Video

VC – vehicle commander

VCE – vehicle-crew evaluator